

Claims

What is claimed is:

1. A method of separating a substance or substances from one or more substances using at least one organic chemical reaction to alter the molecular structure of substances by adding at least one atom to the molecular structure of substances or subtracting at least one atom from the molecular structure of substances and said substance or substances is separated from one or more substances by a mechanical means of separation, comprising;

said substance or substances to be separated from one or more substances,

said at least one organic chemical reaction that alters the molecular structure of substances by adding at least one atom to the molecular structure of substances or subtracting one atom from the molecular structure of substances,

said mechanical means of separation that uses differing physical characteristics of substances to physically change the place or the position of substances that removes or isolates the substances from a combination or a mixture absent any chemical reaction,

said substance or substances to be separated from one or more substances is in said combination or said mixture with one or more substances,

said combination or said mixture that contains said substance or substances to be separated from one or more substances is treated by said at least one organic chemical reaction that alters the molecular structure of substances by adding at least one atom to the molecular structure of substances or by subtracting one atom from the molecular structure of substances,

said at least one organic chemical reaction alters the molecular structure of at least one substance in said combination or said mixture,

the substance with the altered molecular structure is separated from one or more substances in said combination or said mixture by said mechanical means of separation that uses differing physical characteristic of substances to physically change the place or position of substances that removes or isolates substances from said combination or said mixture,

said substance or substances are separated from one or more substances by said mechanical means of separation.

2. A method for separating an organic substance or organic substances from one or more substances using at least one organic chemical reaction to alter the molecular structure of substances by adding at least one atom to the molecular structure of substances or by subtracting at least one atom from the molecular structure of substances, the separation of said organic substance or organic substances is too inefficient or not possible by a specific means of mechanical separation unless alteration of the molecular structure of at least one substance has taken place and said organic substance or organic substances are separated from one or more substances by said specific means of mechanical separation, comprising;

said organic substance or organic substances to be separated from one or more substances by said specific means of mechanical separation that is not efficient enough or is impossible to accomplish,

said at least one organic chemical reaction that alters the molecular structure of substances by adding at least one atom to the molecular structure of substances or subtracting at least one atom from the molecular structure of substances,

said specific means of mechanical separation that uses differing physical characteristics of substances to physically change the place or the position of substances that removes or isolates substances from a combination or a mixture absent any chemical reaction,

said organic substance or organic substances to be separated from one or more substances is in said combination or said mixture with one or more substances,

said combination or said mixture that contains said organic substance or organic substances to be separated from one or more substances is treated by said at least one organic chemical reaction that alters the molecular structure of substances by adding at least one atom to the molecular structure of substances or by subtracting at least one atom from the molecular structure of substances,

said at least one organic chemical reaction alters the molecular structure of at least one substance in said combination or said mixture,

the substance with the altered molecular structure is separated from one or more substances in said combination or said mixture by said specific means of mechanical separation that uses differing physical characteristics of substances to physically change the place or position of substances that removes or isolates substances from said combination or said mixture,

said organic substance or organic substances are separated from one or more substances by said specific mechanical means of separation that would have been too inefficient or not possible by said specific means of mechanical separation unless alteration of the molecular structure of at least one substance had taken place.

3. A method of separating cellulose from one or more low density plastics using at least one or more organic chemical reactions to alter the molecular structure of the cellulose and the altered cellulose is separated from one or more low density plastics by a mechanical means of separation, comprising;

a cellulose fiber or cellulose fiber group to be separated from one or more low density plastics,

at least one organic chemical reaction that alters the molecular structure of said cellulose fiber or cellulose fiber group,

a mechanical means of separation that uses differing physical characteristics of substances to physically change the place or position of substances that removes or isolates substances from a combination or a mixture absent any chemical reaction,

said cellulose fiber or cellulose fiber group to be separated from one or more low density plastics,

said combination or said mixture that contains said cellulose fiber or cellulose fiber group to be separated from one or more low density plastics is treated by said at least one organic chemical reaction that alters the molecular structure of substances by adding at least one atom to the molecular structure of substances or by subtracting at least one atom from the molecular structure of substances,

said at least one organic chemical reaction alters the molecular structure of said cellulose fiber or cellulose fiber group in said combination or said mixture,

said cellulose fiber or cellulose fiber group with the altered molecular structure is separated from one or more low density plastics in said combination or said mixture by said mechanical means of separation that uses differing physical characteristics of substances to physically change the place or position of substances that removes or isolates substances from said combination or said mixture.

4. The method of claim 1 comprising, treating the substance with the altered molecular structure with another one or more organic chemical reactions that reconstructs the altered molecular structure of the substance to the previous molecular structure prior to separation by said mechanical means of separation.

5. The method of claim 1 comprising, said mechanical means of separation that uses differing physical characteristics of substances to physically change the place or the position of substances that remove or isolates substances from said combination or said mixture absent any chemical reaction which includes but is not exclusive to means of screening, semi-permeable membrane, specific gravity flotation, electrostatic techniques, or magnetic attraction.
6. The method of claim 1 comprising, the use of at least one mechanical means of separation prior to using said at least one organic chemical reaction to alter the molecular structure of substances and the substance with the altered molecular structure is separated from one or more substances by said mechanical means of separation.
7. The method of claim 1 comprising, that separates an organic substance or organic substances from one or more substances by a specific mechanical means of separation that would be too inefficient or not possible by said specific mechanical means of separation unless alteration of the molecular structure of at least one substance has taken place and said organic substance or organic substances are separated from one or more substances by said specific mechanical means of separation.
8. The method of claim 2 comprising, treating the substance with the altered molecular structure with another one or more organic chemical reactions that reconstructs the altered molecular structure of the substance to the previous molecular structure prior to separation by said mechanical means of separation.
9. The method of claim 2 comprising, said mechanical means of separation that uses differing physical characteristics of substances to physically change the place or the position of substances that remove or isolates substances from said combination or said mixture absent any chemical reaction which includes but is not exclusive to means of screening, semi-permeable membrane, specific gravity flotation, electrostatic techniques, or magnetic attraction.

10. The method of claim 2 comprising, the use of at least one mechanical means of separation prior to using said at least one organic chemical reaction to alter the molecular structure of substances and the substance with the altered molecular structure is separated from one or more substances by said mechanical means of separation.

11. The method of claim 2 comprising, that separates an organic substance or organic substances from one or more substances by a specific mechanical means of separation that would be too inefficient or not possible by said specific mechanical means of separation unless alteration of the molecular structure of at least one substance has taken place and said organic substance or organic substances are separated from one or more substances by said specific mechanical means of separation.

12. The method of claim 3 comprising, treating the substance with the altered molecular structure with another one or more organic chemical reactions that reconstructs the altered molecular structure of the substance to the previous molecular structure prior to separation by said mechanical means of separation.

13. The method of claim 3 comprising, said mechanical means of separation that uses differing physical characteristics of substances to physically change the place or the position of substances that remove or isolates substances from said combination or said mixture absent any chemical reaction which includes but is not exclusive to means of screening, semi-permeable membrane, specific gravity flotation, electrostatic techniques, or magnetic attraction.

14. The method of claim 3 comprising, the use of at least one mechanical means of separation prior to using said at least one organic chemical reaction to alter the molecular structure of said cellulose fiber or cellulose fiber group and said cellulose fiber or cellulose fiber group with the altered molecular structure is separated from one or more substances by said mechanical means of separation.

15. The method of claim 3 comprising, that separates an organic substance or organic substances from one or more substances by a specific mechanical means of separation that would be too inefficient or not possible by said specific mechanical means of separation unless alteration of the molecular structure of at least one substance has taken place and said organic substance or organic substances are separated from one or more substances by said specific mechanical means of separation.

16. The method of claim 3 comprising, bonding a high density molecule to said cellulose fiber or cellulose fiber group which increases the specific gravity of said cellulose fiber or cellulose fiber group and the new cellulose fiber or cellulose fiber group is separated by specific gravity flotation and after separation the new cellulose fiber or cellulose fiber group is treated with an acid which reconstructs the said cellulose fiber or cellulose fiber group to the original molecular structure and original specific gravity.

17. The method of claim 3 comprising, using an organic chemical reaction to bond a molecule or molecules to said cellulose fiber or cellulose fiber chain that removes lignin from said cellulose fiber or cellulose fiber chain without forming an acid group on said cellulose fiber or cellulose fiber chain.